10/074,527

=> d his

(FILE 'HOME' ENTERED AT 09:16:38 ON 20 JAN 2004)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU, DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 09:16:48 ON 20 JAN 2004

SEA GLYCOSYLTRANSFERASE

2	FILE ADISCTI
2	FILE ADISINSIGHT
393	FILE AGRICOLA
34	FILE ANABSTR
25	FILE AQUASCI
69	FILE BIOBUSINESS
19	FILE BIOCOMMERCE
2846	FILE BIOSIS
500	FILE BIOTECHABS
500	FILE BIOTECHDS
2697	FILE BIOTECHNO
570	FILE CABA
555	FILE CANCERLIT
4168	FILE CAPLUS
128	FILE CEABA-VTB
15	FILE CEN
18	FILE CIN
90	FILE CONFSCI
3	FILE CROPU
179	FILE DISSABS
129	FILE DDFB
37	FILE DDFU
1867	FILE DGENE
129	FILE DRUGB
2	FILE IMSDRUGNEWS
49	FILE DRUGU
1	FILE IMSRESEARCH
46	FILE EMBAL
3924	FILE EMBASE
2226	FILE ESBIOBASE
119	FILE FEDRIP
61	FILE FROSTI
645	FILE FSTA
1948	FILE GENBANK
237	FILE IFIPAT
3490	FILE JICST-EPLUS
1	FILE KOSMET
822	FILE LIFESCI
2	FILE MEDICONF
2608	FILE MEDLINE
4	FILE NIOSHTIC
12	FILE NTIS
4	FILE OCEAN
5591	FILE PASCAL
3	FILE PHAR
1	FILE PHARMAML
5	FILE PHIN
40	FILE PROMT
2974	FILE SCISEARCH
941	FILE TOXCENTER
1415	FILE USPATFULL
54	FILE USPAT2

```
            286   FILE WPIDS
            286   FILE WPINDEX
L1             QUE GLYCOSYLTRANSFERASE
               ---------

     FILE 'PASCAL, CAPLUS, EMBASE, JICST-EPLUS, SCISEARCH, BIOSIS, BIOTECHNO,
     MEDLINE, ESBIOBASE, TOXCENTER, LIFESCI, FSTA, CABA, CANCERLIT, BIOTECHDS'
     ENTERED AT 09:18:37 ON 20 JAN 2004
L2         10569 S L1 AND HUMAN
L3             2 S L2 AND 33945
L4             1 DUP REM L3 (1 DUPLICATE REMOVED)
L5          3372 S L2 AND (ISOLAT? OR PURIF? OR CHARACTERI?)
L6          2102 S L5 AND PY<2000
```

L6 ANSWER 2090 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1997-08759 BIOTECHDS
TITLE: Sequential interchange of four amino acids from blood group-B to blood group-A **glycosyltransferase** boosts catalytic activity and progressively modifies substrate recognition;
in **human** recombinant enzymes; bispecific enzyme engineering and expression in Escherichia coli for improved blood group-A and blood group-B interconversion
AUTHOR: Seto N O L; Palcic M M; Compston C A; Li H; Bundle D R; Narang S A
CORPORATE SOURCE: Nat.Res.Counc.Canada-Inst.Biol.Sci.; Univ.Alberta
LOCATION: Institute for Biological Sciences, National Research Council of Canada, Ottawa, Ontario, K1A 0R6, Canada.
Email: nina.seto@nrc.ca
SOURCE: J.Biol.Chem.; (**1997**) 272, 22, 14133-38
CODEN: JBCHA3
ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An artificial gene strategy was used to construct genes encoding **human** blood group-A and blood group-B **glycosyltransferase** (GT) enzymes, to study alteration of specificity by mutagenesis (R176G, G235S, L266M and G268A mutations). Oligonucleotides were designed with unique restriction sites throughout a GT-A gene (1034 bp) with Escherichia coli-preferred codon usage, and mutants were produced by KpnI-SphI digestion of the GT-B gene and ligating oligonucleotides, followed by expression in E. coli TG1. Soluble forms of recombinant GT-A and hybrid GT-A/B mutants were expressed in high yields. A hybrid GT-A/B mutant which catalyzed both GT-A and GT-B reactions was **isolated**, with a kcat 5-fold higher for the GT-A donor. Even a single amino acid replacement in GT-A with a residue from GT-B (R176G) produced enzymes with only GT-A activity, but with very large (11-fold) increases in kcat and increased specificity. These increases in kcat are among the highest obtained for a single amino acid change, and should be useful in preparative-scale blood group antigen production. (27 ref)

L6 ANSWER 2091 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1997-03766 BIOTECHDS
TITLE: New murine alpha-1,3-fucosyltransferase;
expression in a mouse 32D-c13 or **human** 293 cell culture, for recombinant monoclonal antibody fucosylation for use as an immunosuppressive
AUTHOR: Seed B; Holgersson J
PATENT ASSIGNEE: Gen.Hosp.Boston
LOCATION: Boston, MA, USA.
PATENT INFO: WO 9640881 **19 Dec 1996**
APPLICATION INFO: WO 1996-US6427 8 May 1996
PRIORITY INFO: US 1995-483151 7 Jun 1995
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1997-108639 [10]
AB A new alpha-1,3-fucosyltransferase is of **human** or mouse 32D-c13 cell origin, and is preferably encoded by a specified DNA sequence. The DNA (e.g. a cDNA) may be inserted in a vector for expression in a host cell, e.g. 32D-c13 or a **human** 293 cell culture. A new method for fucosylation of a recombinant protein (e.g. an antibody or AGP-antibody fusion protein) in vivo involves culture of the recombinant cells. A 2nd fucosyltransferase gene (sequence specified) may also be included. The fucosylated recombinant protein product may be used as an immunosuppressive, for protection against an adverse immune reaction, e.g. septic shock or septicemia. In an example, a cDNA clone capable of directing expression of sialyl-Lewis-X determinants was **isolated** in a CDM8 vector, from mouse 32D-c13 mRNA. Plasmid DNA was

isolated and used to transfect a COS-7-m6 cell culture. A clone was **isolated**, which conferred binding of an anti-sialyl-Lewis-X antibody to transfected COS cells. (58pp)

L6 ANSWER 2092 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1996-03810 BIOTECHDS
TITLE: New **isolated glycosyltransferase**-I branching enzyme;
human recombinant beta-1,6-N-acetylglucosaminyltransferase production and expression; antisense oligonucleotide application in disease therapy
AUTHOR: Fukuda M; Bierhuizen M F A
PATENT ASSIGNEE: La-Jolla-Cancer-Res.Found.
LOCATION: La Jolla, CA, USA.
PATENT INFO: US 5484590 **16 Jan 1996**
APPLICATION INFO: US 1993-118906 9 Sep 1993
PRIORITY INFO: US 1993-118906 9 Sep 1993
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1996-087019 [09]
AB A **purified** beta-1,6-N-acetylglucosaminyltransferase (I, EC-2.4.1.102) protein of a specified sequence is claimed. Also disclosed are: i. nucleic acid (NA) encoding (I); ii. vectors containing the NA; iii. recombinant host cells transformed with such vectors, iv. antisense oligonucleotides complementary to the NA; v. antibodies directed to (I); and vi. transgenic non-**human** mammals that express DNA sequences encoding normal or mutant **human** (I) or that express antisense oligonucleotides to DNA encoding normal or mutant **human** (I). DNA encoding **human** (I) was **isolated** from a cDNA library prepared using RNA from **human** PA-1 teratocarcinoma cells. The products can be used to study the role of (I) in development and oncogenesis. They can also be used for alleviating a pathological condition arising as a result of (I) activity such as tumor cell adhesion to endothelium and leukocyte adhesion to inflammatory sites. They can also be used for alleviating a pathological condition caused by underexpression of (I) such as hemolytic disease of the newborn, autoimmune hemolytic anemias and thrombocytopenias. The products can also be used in detection and diagnostic applications. (29pp)

L6 ANSWER 2093 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1996-01785 BIOTECHDS
TITLE: Expression of a recombinant **human glycosyltransferase** from a synthetic gene and its utilization for synthesis of the **human** blood group-B trisaccharide;
artificial gene cloning in Escherichia coli and affinity tail fusion protein secretion
AUTHOR: Seto N O L; Palcic M M; Hindsgaul O; *Bundle D R; Narang S A
CORPORATE SOURCE: Nat.Res.Counc.Canada-Inst.Biol.Sci.; Univ.Alberta
LOCATION: Department of Chemistry, University of Alberta, E3-52 Chemistry Building, Edmonton, Alberta, T6G 2G2, Canada.
SOURCE: Eur.J.Biochem.; (**1995**) 234, 1, 323-28
CODEN: EJBCAI
ISSN: 0014-2956
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A 1034-bp artificial gene encoding **human** blood-group-B-**glycosyltransferase**, catalyzing transfer of galactose from UDP-Gal to Fuc-alpha-1,2-Gal-beta-OR to give the blood group-B determinant Gal-alpha-1,3-Fuc-alpha-1,2-Gal-beta-OR (where R is a glycoprotein or glycolipid) was expressed in Escherichia coli TG1 by replacing its membrane anchoring domain with a bacterial outer membrane protein ompA protein secretion signal peptide, and adding a histidine affinity tail sequence. The gene was constructed from 50

oligonucleotides in 3 blocks or synthons, and cloned in a plasmid pUC8 vector, downstream from a ribosome binding site and under the control of a lac promoter. The active enzyme was **purified** in soluble form from the periplasm using UDP-hexanolamine affinity chromatography and used in production of preparative amounts of **human** blood group-B trisaccharide antigen. The substrate specificity and kinetics of the recombinant enzyme were comparable to the enzyme from **human** serum. This recombinant enzyme may be useful in production of complex polysaccharides. (22 ref)

L6 ANSWER 2094 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1995-12253 BIOTECHDS
TITLE: The **human** UDP-N-acetylglucosamine:alpha-6-D-mannoside-beta-1,2-N-acetylglucosaminyltransferase-II gene (MGAT2): cloning of genomic DNA, localization to chromosome-14q21;
expression in insect cells and **purification** of the recombinant protein; DNA sequence and use in oligosaccharide production
AUTHOR: Tan J; D'Agostaro G A F; Bendiak B; Reck F; Sarkar M; Squire J A; Leong P; *Schachter H
CORPORATE SOURCE: Hosp.Sick-Child.Toronto; ENEA; Univ.Washington-Seattle-Biomembrane-Inst.; Univ.Toronto
LOCATION: Department of Biochemistry, Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, M5G 1X8, Canada.
SOURCE: Eur.J.Biochem.; (**1995**) 231, 2, 317-28
CODEN: EJBCAI
ISSN: 0014-2956
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A **human** alpha-1,6-mannosyl-glycoprotein-beta-1,2-N-acetylglucosaminyltransferase (EC-2.4.1.143) gene was **isolated** from a DNA library in phage lambda-EMBL3, using a 1.2-kb rat liver cDNA probe. 2 Fragments (3.0 and 3.5 kb) were subcloned into plasmid pBluescript to give plasmid pHG30 and plasmid pHG36, with overlapping clones of 5.5 kb genomic DNA. The pHG30 insert contained a 1341-bp open reading frame encoding a 447-amino-acid protein. There was no sequence similarity to previously cloned **glycosyltransferases**. The gene was mapped to chromosome-14q21 by fluorescence in situ hybridization, and the coding region was on a single exon. The full-length gene was expressed in an Sf9 Spodoptera frugiperda insect cell culture, using a plasmid pBlueBacHis-B transfer vector and Autographa californica nuclear-polyhedrosis virus. The recombinant enzyme was **purified** to near homogeneity by nickel nitrilotriacetate resin metal chelate affinity chromatography and pressure dialysis, to give a yield of 20% and a specific activity of 20 umol/min.mg. The enzyme may be used in chemo-enzymatic production of novel oligosaccharides. (85 ref)

L6 ANSWER 2095 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1995-11664 BIOTECHDS
TITLE: Protein engineering of cyclodextrin-**glycosyltransferase** from Bacillus circulans strain 251;
recombinant cyclomaltodextrin-glucanotransferase production by expression in Bacillus subtilis, and **purification, characterization** and enzyme engineering (conference paper)
AUTHOR: Dijkhuizen L; Penninga D; Rozeboom H J; Strokopytov B; Dijkstra B W
CORPORATE SOURCE: Univ.Groningen
LOCATION: Department of Microbiology, Laboratory of Biophysical Chemistry, University of Groningen, 9751 NN Haren, The Netherlands.
SOURCE: Meded.Fac.Landbouwwet.Rijksuniv.Gent; (**1994**) 59,

4b, 2439-42
CODEN: MFLRA3
ISSN: 0368-9697
8th Forum for Applied Biotechnology, Bruges, Belgium, 28-30 September, 1994.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To produce cyclodextrins using Bacillus circulans 251 cyclomaltodextrin-**glycosyltransferase** (CTG, EC-2.4.1.19) for **human** consumption, a detailed knowledge of the 3-dimensional structure of CTG is required. To elucidate the catalytic and substrate binding mechanisms of CTG, mutant proteins were produced using mutant Bacillus subtilis DB104A grown in 3 l fermentors, which produced high extracellular levels of CGT. After concentration and **purification**, up to 112 mg of mutant CGT was produced in a 15-60% yield. From inspection of electron density maps, 3 carbohydrate binding sites, located in each case parallel to the flat surfaces of aromatic rings, were identified. In these electron densities, alpha-maltose could be modelled. To elucidate the precise functions of the carboxylates in the active site, Asp-229, Glu-257 and Asp-328 were replaced by asparagine and glutamine by site-directed mutagenesis. All mutant proteins were **purified** and crystallized, allowing a detailed comparison with the wild-type protein. Modelling studies and protein sequence comparisons suggested that Tyr-195 may play an important role in the cyclization reaction. (14 ref)

L6 ANSWER 2096 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1993-07211 BIOTECHDS
TITLE: **Purification** and **characterization** of recombinant **human** beta-1-4-galactosyltransferase expressed in Saccharomyces cerevisiae; recombinant lactose-synthase production in protease-deficient yeast host
AUTHOR: Krezdorn C H; Watzele G; Kleene R B; Ivanov S X; *Berger E G
LOCATION: Institute of Physiology, University of Zuerich, Winterthurer Strasse 190, CH-8057 Zuerich, Switzerland.
SOURCE: Eur.J.Biochem.; (**1993**) 212, 1, 113-20
CODEN: EJBCAI
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Protease-deficient Saccharomyces cerevisiae BT 150 was used to express full-length cDNA of HeLa lactose-synthase (LS, 2.4.1.22), using plasmid pDPGTB5 as vector. Recombinant LS had an apparent mol.wt. of 48,000, which was reduced to 47,000 following treatment with endo-beta-N-acetylglucosaminidase (EC-3.2.1.96), indicating that the recombinant enzyme was N-glycosylated and, therefore, competent for translocation across the membranes of the endoplasmic reticulum. Specific LS assays using N-acetylglucosamine or glucose in combination with alpha-lactalbumin as exogenous acceptor substrates, showed that recombinant LS was present in crude homogenates. Analysis of the disaccharide products by PMR showed that only beta-1,4-linkages were formed by the recombinant LS. The recombinant LS was solubilized using Triton X-100 and then **purified** by affinity chromatography on N-acetylglucosamine-derivatized Sepharose and alpha-lactalbumin-Sepharose. The **purified** enzyme had a specific activity comparable to that of soluble LS from **human** milk. Thus, yeast is an appropriate host system for the expression of mammal **glycosyltransferases**. (50 ref)

L6 ANSWER 2097 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1992-13739 BIOTECHDS
TITLE: Combined chemical-enzymic synthesis of an internally monofucosylated hexasaccharide corresponding to the CD-65/VIM-2 epitope: use of a terminal alpha-2,6-linked

N-acetylneuraminic acid as a temporary blocking group; VIM-2 epitope preparation using rat liver sialyltransferase, **human** milk fucosyltransferase and Clostridium perfringens immobilized sialidase

AUTHOR: Kashem M A; Jiang C; *Venot A P; Alton G R

CORPORATE SOURCE: Chembiomed

LOCATION: Alberta Research Council, Carbohydrate Research, P.O. Box 8330, Station F, Edmonton, Alberta, T6H 5X2, Canada.

SOURCE: Carbohydr.Res.; (**1992**) 230, 2, C7-C10
CODEN: CRBRAT

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The hexasaccharide determinant of the CD-65/VIM-2 epitope (2) was produced, starting from the tetrasaccharide (1) (where X = alpha-Neu5Ac, and R = (CH2)8CO2CH3 (2a) or (CH2)8COOH (2b)), by using **glycosyltransferases** and an alpha-2,6-linked Neu5Ac residue as a temporary blocking group. The process was **characterized** by selective internal monofucosylation directed by a temporary alpha-2,6-sialyl blocking group, and an enzymatic sequence where fucosylation preceded sialylation. Compound (2) (6.5 mg) was treated with rat liver Gal(beta-1,4)-GlcNAc-alpha-2,6-sialyltransferase, **human** milk GlcNac-alpha-1,3/4-fucosyltransferase, Clostridium perfringens immobilized sialidase (EC-3.2.1.18, in 50 mM sodium cacodylate buffer, pH 5.2, for 24 hr at 37 deg), and rat liver Gal(beta-1,3/4)-GlcNac-alpha-2,3-sialyltransferase, to give the hexasaccharides (2a) (0.7 mg) and (2b) (0.5 mg). A heptasaccharide (1.7 mg) was obtained by sequential sialylation of (1) by Gal(beta-1,3/4)-GlcNAc-alpha-2,3-sialyltransferase, followed by difucosylation by GlcNAc-alpha-1,3/4-fucosyltransferase. (22 ref)

L6 ANSWER 2098 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN

ACCESSION NUMBER: 1991-10414 BIOTECHDS

TITLE: Structures of the asparagine-289-linked oligosaccharides assembled on recombinant **human** plasminogen expressed in a Mamestra brassicae cell line (IZD-MBO503); detection of glycosylation in M. brassicae and Manduca sexta cell culture

AUTHOR: Davidson D J; *Castellino F J

LOCATION: Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, Indiana 46556, USA.

SOURCE: Biochemistry; (**1991**) 30, 27, 6689-96
CODEN: BICHAW

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Mamestra brassicae IZD-MDO503 cells were infected for 48 hr with a recombinant baculo virus containing (R561E) **human** plasminogen (rHPg) cDNA. Approximately 63% of the total N-linked oligosaccharides expressed by the cells were of the complex type, with bisialo-biantennary (28%), asialo-biantennary (7%), fucosylated bisaialo-biantennary (25%) and fucosylated asialo-biantennary (3%) oligosaccharides representing the major complex-type carbohydrate species. The remaining oligosaccharides were of the high-mannose type. Investigations of rHPg expression in Manduca sexta cell line CM-1 also demonstrated that (alpha-2,6)-linked sialic acid was present on the **purified** protein, suggesting that the ability of insect cells to assemble complex-type oligosaccharide on rHPg was general in nature; similar results had been obtained previously using Spodoptera frugiperda cell line IPLB-SF-21AE. Thus, although endogenous insect proteins do not contain N-linked complex oligosaccharide, the **glycosyltransferase** genes required for assembly of such structures are present in these cells and can be utilized under appropriate conditions. (32 ref)

L6 ANSWER 2099 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN

ACCESSION NUMBER: 1991-06853 BIOTECHDS

TITLE: DNA molecules encoding histo-blood group-A and blood group-B **glycosyltransferase** enzymes, and product of blood group-O gene;
expression in transfected COS-1 or HeLa cell culture, or non-pathogenic bacterium for use in blood typing and tumor therapy; monoclonal antibody production from hybridoma; DNA sequence
PATENT ASSIGNEE: Biomembrane-Inst.
PATENT INFO: WO 9103484 **21 Mar 1991**
APPLICATION INFO: WO 1990-US4942 30 Aug 1990
PRIORITY INFO: US 1989-402695 31 Aug 1989
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1991-102024 [14]
AB **Isolated** DNA molecules (cDNA or genomic) are claimed encoding histo-blood group-A **glycosyltransferase** (specified DNA and protein sequences), histo-blood group-B **glycosyltransferase**, and a protein comprising a product of a histo-blood group-O gene. DNA molecules are also claimed which are capable of hybridizing with DNA encoding the A, B and O proteins. The following are also claimed: a method for detecting blood group ABO status; DNA constructs comprising the A or B **glycosyltransferase** DNA sequence; recombinant plasmids comprising a promoter followed downstream by the DNA sequence of the A or B **glycosyltransferase** and a polyadenylation signal; cells stably transfected with the recombinant plasmids; production of the A or B **glycosyltransferase** by culturing transfected cells, preferably mammalian cells, especially COS-1 or HeLa cells; a non-pathogenic bacterial cell containing a DNA sequence encoding the A **glycosyltransferase** for use in suppressing tumor growth in a patient; **human** blood group-A **glycosyltransferase** protein; and monoclonal antibody that binds to the A enzyme and is produced by hybridoma WKH-1 ATCC HB 10207. (59pp)

L6 ANSWER 2100 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1988-03339 BIOTECHDS
TITLE: DNA fragment encoding Shigella dysenteriae chromosome;
O-antigen gene cloning in Escherichia coli, vaccine preparation
PATENT ASSIGNEE: Timmis K N
PATENT INFO: EP 250614 **7 Jan 1988**
APPLICATION INFO: EP 1986-108541 23 Jun 1986
PRIORITY INFO: EP 1986-108541 23 Jun 1986
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 1988-000695 [01]
AB A novel chromosomal DNA sequence from Shigella dysenteriae 1 encodes the nucleotide sugar synthetases and **glycosyltransferases** involved in the biosynthesis of the O-antigen. The sequence has length 8.9 kb and restriction map (I) (where II = PvuI, C = ClaI, H = HindIII, Hp = HpaI, X = XhoI and V = EvoRV). Recombinant DNA molecules encoding the sequence can be used for amplification of cloned fragments of Escherichia coli and other enteric bacteria, and if operatively linked to an expression control sequence, for the high level production of O-antigen. The transformed hosts can be used in a vaccine for prevention of bacilliary dysentery. A recombinant plasmid encoding the sequence is also claimed. The sequence is specifically **isolated** from the rfp gene region of plasmid pHW400 of S. dysenteriae. A recombinant plasmid encoding this sequence is plasmid pSS37. For expression the sequence is preferably under the control of the E. coli lac promoter system, beta-lactamase promoter, trp- promoter or lipoprotein promoter. The host is especially E. coli K12 capable of invading the **human** intestinal epithelium. (11pp)

L6 ANSWER 2101 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN

ACCESSION NUMBER: 1988-01300 BIOTECHDS
TITLE: **Characterization** of the expression products of recombinant **human** choriogonadotropin and subunits; expressed in mouse C127 cell culture; vector construction
AUTHOR: Lustbader J; Birken S; Pollak S; Levinson L; Bernstine E; Hsiung N
CORPORATE SOURCE: Integrated-Genet.
LOCATION: Department of Medicine, College of Physicians and Surgeons of Columbia University, 630 West 168th St., New York, NY 10032, USA.
SOURCE: J.Biol.Chem.; (**1987**) 262, 29, 14204-12
CODEN: JBCHA3
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The expression of active **human** choriogonadotropin (hCG) in mouse C127 cells transfected with expression vectors containing DNA encoding both subunits is reported. The bovine papilloma virus vectors pRF374 and pRF375 encoded the alpha gene from p-alpha-574, and vector pRF398 encoded the beta-hCG DNA from p-beta-579. Expression products were **purified** by affinity chromatography using specific monoclonal antibodies. The system secreting biologically active hCG also produced a 10-fold or greater molar excess of free beta subunit. The dimeric hormone as well as the excess beta subunit resembled the standard urinary hCG and beta subunit. When the vector encoding the alpha subunit was expressed alone, the alpha subunit had a higher mol.wt. than both standard alpha and the alpha found in the expressed dimeric hormone. Free alpha subunit appears to be a potential substrate for addition of extra sugar moieties. The conformation of free alpha subunit in the regions of the glycosylation recognition sites allows easier access for **glycosyltransferases** than those same sites in the beta subunit. (50 ref)

L6 ANSWER 2102 OF 2102 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN
ACCESSION NUMBER: 1986-11909 BIOTECHDS
TITLE: Enzymatic synthesis of radiolabeled oligosaccharides of **human** interleukin-2; using pig **glycosyltransferase** (conference abstract)
AUTHOR: Conradt H S; Dittmar K E J; Hauser H; Lindenmaier W
CORPORATE SOURCE: Ges.Biotechnol.Forsch.
LOCATION: Dept. of Genetics, GBF, D-3300 Braunschweig, Germany.
SOURCE: Biol.Chem.Hoppe Seyler; (**1986**) 367, Suppl., 191
CODEN: BCHSEI
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Human** interleukin-2 (IL-2) contains a single oligosaccharide (NeuAca2-3Galbeta1- 3(NeuAca2-6)GalNAc) attached O-glycosidically to Thr3 of the polypeptide chain. The IL-2 molecule, which can be **isolated** from the **human** leukemic T cell line Jurkat, contains predominantly a GalNAc residue attached to the same amino acid position. Using (partially) **purified** **glycosyltransferases** (from pig liver and submaxillary gland), natural **human** IL-2 molecule with radiolabeled sugar constituents from the GalNAc-O-IL-2 was reconstituted. The IL-2 protein radiolabeled in its carbohydrate moiety is used for in vitro studies of the metabolism of this important lymphokine. (0 ref)